INDEX 2009 SMPTE MOTION IMAGING JOURNAL

VOLUME 118

Table of Contents		4/
Subject Index		
Subject Index		50
Author Index		57



INDEX 2009 SMPTE MOTION IMAGING JOURNAL

VOLUME 118

Table of Contents		4/
Subject Index		
Subject Index		50
Author Index		57



Table of Contents January – December 2009 Volume 118

January/February

Messages from the 2009 SMPTE Officers
SMPTE Sustaining Members
SMPTE 2008 Member-Get-a-Member Campaign Winners
Toronto Mike Prest and Brad Fortner
Rocky Mountain Jim Schoedler
SMPTE Section Webcasting Guidelines
SMPTE Section Webcasting Peter Hammar
Section Meetings
Layered Motion Compensation for Moving Image Compression Gary Demos
The Use of MPEG-4 AVC in the Contribution Market Ali Jerbj and Jaehan In
New MPEG-4-AVC/H.264 Profiles for Professional and High-Quality Video Applications Haoping Yu
Efficient Lossless to Lossy Transcoding of JPEG 2000 Codestreams for D-Cinema Takahiro Fukuhara, Katsutoshi Ando,
and Hitoshi Kiya
Obituaries
SMPTE Almanac Michael Dolan
March
Message from the Executive Director Kimberly Maki.
SMPTE Wins Emmy Award For MXF Standard
Section Meetings.
Implementing Networked File-Based Workflows Clyde Smith
MXF "Mit Out Essence" Oliver Morgan
Service-Oriented Architecture (SOA) in Media Systems John Footen
Seven Concepts of Media-Aware Storage Architectures Joey Faust
Content ID: The Elephant in the Room Christopher Lennon, Karen Broome, Harold Geller, and Régis Flad
SMPTE Sustaining Members
SMPTE Almanac Michael Dolan
April
Message from the Executive Director Kimberly Maki.
SMPTE Sustaining Members
Standards Update Peter Symes
Section Meetings.
SMPTE DC Study Group Report Jim Wilkinson and Kommer Kleijn
The Current Status of Digital Intermediate Curtis Clark, Howard Lukk, and Jim Whittlesey
Rendering of Scene Data in Digital Cinema Workflows Gabriel Fielding and Thomas O. Maier
Mscope: Anamorphic Capture with Dual CIF HD Milan Krsljanin
Digital Dailies in the 21st Century Brian Gaffney



Digital Film Archival Using JPEG 2000 and MXF—Formats and Practical Applications Arne Nowak and Siegfried Fößel
SMPTE Almanac Michael Dolan
May/June
Director's Notebook—Highlights of the 2009 NAB Digital Cinema Summit Kimberly Maki
SMPTE Sustaining Members
Section Meetings
Routing Switcher and System Design Considerations for Large 3 Gbit/sec Core Facilities Birney Dayton
Considerations in Physical Infrastructures for 3 Gbit/sec Systems Design Karl Paulsen, Michael Walter, Keith Graham, and Randy Hoffner
Considerations When Designing for the SMPTE 424M Interface Mark Sauerwald
11.88 Gbits/sec: Continuing the Evolution of Serial Digital Interface Nigel Seth-Smith, Gareth M. Heywood, and Ryan Latchman 43
Coaxial Cable Issues with 3 Gbit/sec Video Stephen H. Lampen
SMPTE Almanac Michael Dolan
July/August
Message from the President Ken Fuller
SMPTE Sustaining Members
SMPTE PDA Update Joel Welch
SMPTE Members Receive Awards at NAB 2009
Results of the 2009 Section Elections
Section Meetings
Defining 3D Home Master: Summary Report of SMPTE Task Force on 3D to the Home William Zou
The 4:2:2/4:2:0 Perfect Reconstruction Filter Set and Its Application in HD-SNG Akira Nakagawa
Getting the Shot: Advanced MPEG-4 AVC Encoding and Robust COFDM Modulation Deliver HD-ENG John L. Pittas
User-Centric Development of New Metadata Tools to Enhance File-Based Newsgathering Workflows D. Trepess and N. Kotaka 50
Eratum
SMPTE Almanac Michael Dolan
September
Message from the President Ken Fuller
SMPTE Sustaining Members
Message from the Executive Vice President Peter Ludé
Section Meetings
Joint EBU/SMPTE Task Force on Synchronization System and Time Labeling Announcement
New Digital Distribution Channels Drive SMPTE Standards Work Wendy Aylsworth
Essence (10E) Al Barton and Rick Ackermans.
Film Applications (20F) John C. Miller
Digital Cinema Applications (21DC) Dave Schnuelle and John Hurst
Television Applications (22TV) Michael Dolan
Broadband (23B) Birney Dayton28
Metadata and Registers (30MR) Phil Tudor and Paul Treleaven

File Structures (31FS) Ernesto Santos and Ann Marie Rohaly	30
Network/Facilities Infrastructure (32NF) Christopher Lennon and Alan Lambshead	31
Advanced Television Systems Committee (ATSC) Update Jerry Whitaker	33
Digital Television Broadcasting in the United States Bill Hayes	38
Broadcast Acquisition and Post-Production Karl Paulsen	44
An Update from the Consumer Electronics Association Brian Markwalter.	50
American Society of Cinematographers (ASC) Technology Committee Report Curtis Clark et al	52
Digital Cinema in 2009 Michael Karagosian	66
2009 Report on Stereoscopic 3D Production Bernard Mendiburu	68
2009 IPTV Update Howard Greenfield and Wes Simpson	72
SMPTE Almanac Michael Dolan	
October	
Message from the Editorial Vice President Paul J. Hearty	4
SMPTE Sustaining Members	6
2009 Conference Preview	
Sponsors Page	8
Program Schedule	9
Exhibitors and Floor Plan	
2009 SMPTE Fellows	
2009 Honors and Awards Recipients	19
Section Meetings	22
Erratum	25
A Method of Video Production Using Dynamic 3D Models and its Application to Making Scenes of a Crowd	
K. Hisatomi, K. Tomiyama, M. Katayama, Y. Iwadate, K. Matsunaga, Y. Ito, and W. Ishihara	29
SMPTE Digital Cinema White Gamut Practices Study Group Report Rod Bogart and Rick Sayre	
4K and Beyond—Comparing Digital Camera Performance: Part 1 Hans Kiening	
High Frame-Rate Television M. G. Armstrong, D. J. Flynn, M. E. Hammond, S. J. E. Jolly, and R. A. Salmon	54
SMPTE Almanac Michael Dolan	61
November/December	
2009 Society Election Results	
Message from the President	4
SMPTE Sustaining Members	6
2009 Conference Review	
Section Meetings.	18
File Formats in Television Archiving and Content Exchange Peter Thomas	22
Sustainable Archiving and Storage Management of Audiovisual Digital Assets M. Addis et al	27
JPEG 2000: A Potential Solution for Archiving HDTV Content Adi Kouadio	33
SMPTE Almanac Michael Dolan	43

INDEX TO SUBJECTS January - December 2009 Volume 118

Errata

Re: "American Society of Cinematographers Technology Committee Report, by Curtis Clark, et al, Sept., 2009, correction, Oct., 25

Re: "11.99 Gbits/sec: Continuing the Evolution of Serial Digital Interface, *Nigel Seth-Smith, Gareth M. Heywood, and Ryan Latchman*, May/June, 2009, correction, July/Aug., 58

Feature Articles

Compression/Transcoding

Layered Motion Compensation for Moving Image Compression, Demos, Jan./Feb., 27

Digital Cinema

The Current Status of Digital Intermediate, Clark, Lukk, Whittlesey, Apr., 27

Image Acquisition

A Method of Video Production Using Dynamic 3D Models and its Application to Making Scenes of a Crowd, *Hisatomi, Tomiyama, Katayama, Iwadate, Matsunaga, Ito, and Ishihara*, Oct., 29

IT/Workflow

Implementing Networked File-Based Workflows, Smith, Mar., 22

Obituaries

Paul Berger, Jan./Feb., 57

Charles Sandbank, Jan./Feb., 57

Reports

Engineering Reports

Defining 3D Home Master: Summary Report of SMPTE Task Force on 3D to the Home, *Zou*, July/Aug., 23

SMPTE DC Study Group Report, Wilkinson and Kleijn, Apr., 22

SMPTE Digital Cinema White Gamut Practices Study Group Report, Bogart and Sayre, Oct., 37

SMPTE Technology Committee Reports:

New Digital Distribution Channels Drive SMPTE Standards Work, Aylsworth, Sept., 23

Essence (10E) Barton and Ackermans, Sept. 24

Film Applications (20F) Miller, Sept., 25

Digital Cinema Applications (21DC) Schnuelle and Hurst, Sept., 26

Television Applications (22TV), Dolan, Sept., 27

Broadband (23B), Dayton, Sept., 28

Metadata and Registers (30MR) Tudor and Treleaven, Sept., 29

File Structures (31FS) Santos and Marie Rohaly, Sept., 30

Network/Facilities Infrastructure (32NF), Lennon and Lambshead, Sept., 31

Industry Reports

Advanced Television Systems Committee (ATSC) Update, Whitaker, Sept., 33

Digital Television Broadcasting in the United States, *Hayes*, Sept., 38 Broadcast Acquisition and Post-Production, *Paulsen*, Sept., 44

An Update from the Consumer Electronics Association, Markwalter, Sept., 50

American Society of Cinematographers (ASC) Technology Committee Report, Clark et al., Sept., 52

Digital Cinema in 2009, Karagosian, Sept., 66

2009 Report on Stereoscopic 3D Production, Mendiburu, Sept., 68

2009 IPTV Update, Greenfield and Simpson, Sept., 72

Officers and Governors

Results of the 2009 Society Elections, Nov./Dec., 3

Message from: Executive Director, Maki, Mar., 2; Apr. 4; May/June, 4

Editorial Vice President, Hearty, Oct., 4

Executive Vice President, Ludé, Sept., 7

President, Fuller, July/Aug., 5; Sept., 5; Nov./Dec., 4

Messages from 2009 Officers, Jan./Feb., 4

Section Activities

Results of the 2009 Section Elections, July/Aug., 11

SMPTE 2008 Member-Get-a-Member Campaign Winners, Jan./Feb.,10

Toronto, Prest and Fortner, Jan./Feb.,11

Rocky Mountain, Schoedler, Jan./Feb., 14

SMPTE Section Webcasting Guidelines, Jan./Feb., 16

SMPTE Section Webcasting, Hammar, Jan./Feb., 17

Meeting Reports

Atlanta, May/June, 12

Detroit, May/June, 15

Hollywood, Mar., 10, Apr., 10; July/Aug., 12; Sept., 17; Nov./Dec., 18

Hong Kong, Jan./Feb., 20; Mar., 11; July/Aug., 12

New England, Jan./Feb., 23, Apr., 13; May/June, 15

New York, Mar., 12; Oct., 22;

Pasadena City College, Jan./Feb., 24

Philadelphia, Mar., 14

Rochester, Jan./Feb., 25; Mar., 16; May/June, 16; July/Aug., 14; Sept., 17

Sacramento, Jan./Feb., 24, Mar., 16

San Francisco, Mar., 16; May/June, 16; July/Aug., 15; Oct., 24 Toronto, Jan./Feb., 25; Mar., 17; July/Aug., 16; Nov./Dec., 18 Washington D.C., Mar., 17; Apr., 13; July/Aug., 17, 18

SMPTE Activities

Awards and Honors

2009 SMPTE Fellows, Oct., 15

2009 Honors and Awards Recipients, Oct., 19

SMPTE Wins Emmy Award for MXF Standard, Mar., 6

SMPTE Members Receive Awards at NAB 2009, July/Aug., 10

History

SMPTE Almanac, Michael Dolan, Jan./Feb., 59; Mar., 53; Apr., 61; May/June, 61; July/Aug., 61; Sept., 77; Oct., 60; Nov./Dec., 43

Meetings and Conferences

Director's Notebook—Highlights of the 2009 NAB Digital Cinema Summit, Maki, May/June, 4

2009 Tech Conference, Sept., 12; Oct., 8

2009 Tech Conference Review, Nov./Dec., 9

Professional Development Academy

PDA Update, Welch, July/Aug., 8

Standards

Joint EBU/SMPTE Task Force on Synchronization System and Time Labeling Announcement, Sept., 22

Standards Update, Symes, Apr., 8

SMPTE Wins Emmy Award for MXF Standard, Mar., 6

Technical Papers

Compression/Transcoding

Efficient Lossless to Lossy Transcoding of JPEG 2000 Codestreams for D-Cinema., Fukuhara, Ando, and Kiya, Jan./Feb., 50

Layered Compensation for Moving Image Compression, *Demos*, Jan./Feb., 27

New MPEG-4-AVC/H.264 Profiles for Professional and High-Quality Video Applications, Yu, Jan./Feb., 45

The Use of MPEG-4 AVC in the Contribution Market, *Jerbi and In*, Jan./Feb., 34

Digital Cinema

4K and Beyond—Comparing Digital Camera Performance: Part 1, Kiening, Oct., 48

Digital Dailies in the 21st Century, Gaffney Apr., 43

Digital Film Archival Using JPEG 2000 and MXF—Formats and Practical Applications, *Nowak and Fößel*, Apr., 50

Efficient Lossless to Lossy Transcoding of JPEG 2000 Codestreams for D-Cinema., Fukuhara, Ando, and Kiya, Jan./Feb., 50

Mscope: Anamorphic Capture with Dual CIF HD, Krsljanin, Apr., 37 Rendering of Scene Data in Digital Cinema Workflows, Fielding and

Digital Newsgathering

Maier, Apr., 32

Getting the Shot: Advanced MPEG-4 AVC Encoding and Robust COFDM Modulation, Deliver HD-ENG, *Pittas*, July/Aug., 40

The 4:2:2/4:2:0 Perfect Reconstruction Filter Set and Its Application in HD-SNG, *Nakagawa*, July/Aug., 29

User-Centric Development of New Metadata Tools to Enhance File-Based Newsgathering Workflows, *Trepess and Kotaka*, July/Aug., 50

Image Acquisition

· 4K and Beyond—Comparing Digital Camera Performance: Part 1, Kiening, Oct., 48

A Method of Video Production Using Dynamic 3D Models and its Application to Making Scenes of a Crowd, *Hisatomi*, Oct., 29

High Frame-Rate Television, Armstrong, Flynn, Hammond, Jolly, and Salmon, Oct., 54

IT/Workflow

Content ID: The Elephant in the Room, Lennon, Broome, Geller, and Flad, Mar., 45

MXF "Mit Out Essence" Morgan, Mar., 26

Service-Oriented Architecture (SOA) in Media Systems, Footen, Mar., 33

Seven Concepts of Media-Aware Storage Architectures, Faust, Mar., 38

Storage/Archiving

Digital Film Archival Using JPEG 2000 and MXF—Formats and Practical Applications, Nowak and Fößel, Apr., 50

File Formats in Television Archiving and Content Exchange, *Thomas*, Nov./Dec., 22

JPEG 2000: A Potential Solution for Archiving HDTV Content, Kouadio, Nov./Dec., 33

Seven Concepts of Media-Aware Storage Architectures, Faust, Mar., 38

Sustainable Archiving and Storage Management of Audiovisual Digital Assets, *Addis et al.* Nov./Dec., 27

X-Gigabit Architectures

11.88 Gbits/sec: Continuing the Evolution of Serial Digital Interface, Seth-Smith, Heywood, and Latchman, May/June, 43

Coaxial Cable Issues with 3 Gbit/sec Video, Lampen, May/June, 55

Considerations in Physical Infrastructures for 3 Gbit/sec Systems Design, *Paulsen, Walter, Graham, and Hoffner*, May/June, 30

Considerations When Designing for the SMPTE 424M Interface, Sauerwald, May/June, 39

Routing Switcher and System Design Considerations for Large 3 Gbit/sec Core Facilities, *Dayton*, May/June, 23

INDEX TO AUTHORS January – December 2009 Volume 118

Addis, M., et al.

Sustainable Archiving and Storage Management of Audiovisual Digital Assets, Nov./Dec., 27

Ando, Katsutoshi; Fukuhara, Takahiro; Kiya, Hitoshi

Efficient Lossless to Lossy Transcoding of JPEG 2000 Codestreams for D-Cinema, Jan./Feb., 50

Armstrong, M. G., et al.

High Frame-Rate Television. Oct., 54

Bogart, Rod and Sayre, Rick

SMPTE Digital Cinema White Gamut Practices Study Group Report, Oct., 37

Broome, Karen; Lennon, Christopher; Geller, Harold; Flad, Régis

Content ID: The Elephant in the Room, Mar., 45

Clark, Curtis; Lukk, Howard; Whittlesey, Jim

The Current Status of Digital Intermediate, Apr., 27

Clark, Curtis

American Society of Cinematographers (ASC) Technology Committee Report, Sept., 52

Dayton, Birney

Routing Switcher and System Design Considerations for Large 3 Gbit/sec Core Facilities, May,June, 23

Demos, Gary

Layered Motion Compensation for Moving Image Compression, Jan/Feb., 27

Faust, Joey

Seven Concepts of Media-Aware Storage Architectures, Mar., 38

Fielding, Gabriel and Maier, Thomas O.

Rendering of Scene Data in Digital Cinema Workflows, Apr., 32

Flad, Régis; Lennon, Christopher; Broome, Karen; Geller, Harold

Content ID: The Elephant in the Room, Mar., 45

Fößel, Siegfried and Nowak, Arne

Digital Film Archival Using JPEG 2000 and MXF—Formats and Practical Applications, Apr., 50

Footen, John

Service-Oriented Architecture (SOA) in Media Systems, Mar., 33

Fukuhara, Takahiro; Ando, Katsutoshi; Kiya, Hitoshi

Efficient Lossless to Lossy Transcoding of JPEG 2000 Codestreams for D-Cinema, Jan./Feb., 50

Gaffney, Brian

Digital Dailies in the 21st Century, Apr., 43

Geller, Harold; Lennon, Christopher; Broome, Karen; Flad,

Content ID: The Elephant in the Room, Mar., 45

Graham, Keith; Paulsen, Karl; Walter, Michael; Hoffner, Randy

Considerations in Physical Infrastructures for 3 Gbit/sec Systems Design, May/June, 30

Greenfield, Howard and Simpson, Wes

2009 IPTV Update, Sept., 72

Hayes, Bill

Digital Television Broadcasting in the United States, Sept. 38

Hoffner, Randy; Paulsen, Karl; Walter, Michael; Graham, Keith

Considerations in Physical Infrastructures for 3 Gbit/sec Systems Design, May/June, 30

Heywood, Gareth M.; Seth-Smith, Nigel; Latchman, Ryan

11.88 Gbits/sec: Continuing the Evolution of Serial Digital Interface, May/June, 43

Hisatomi, K., et al.

A Method of Video Production Using Dynamic 3D Models and its Application to Making Scenes of a Crowd, Oct., 29

In, Jaehan and Jerbi, Ali

The Use of MPEG-4 AVC in the Contribution Market., Jan./Feb., 34

Jerbi, Ali and In, Jaehan

The Use of MPEG-4 AVC in the Contribution Market., Jan./Feb., 34

Karagosian, Michael

Digital Cinema in 2009, Sept., 66

Kiening, Hans

4K and Beyond—Comparing Digital Camera Performance: Part 1, Oct., 48

Kiya, Hitoshi; Fukuhara, Takahiro; Ando, Katsutoshi

Efficient Lossless to Lossy Transcoding of JPEG 2000 Codestreams for D-Cinema, Jan/Feb., 50

Kleijn, Kommer

SMPTE DC Study Group Report, Apr., 22

Kotaka, N. and Trepess, D.

User-Centric Development of New Metadata Tools to Enhance File-Based Newsgathering Workflows, July/Aug., 50

Kouadio, Adi

JPEG 2000: A Potential Solution for Archiving HDTV Content, Nov./Dec., 33

Krsljanin, Milan

Mscope: Anamorphic Capture with Dual CIF HD, Apr., 37

Lampen, Stephen. H.

Coaxial Cable Issues with 3 Gbit/sec Video, May/June, 55

Latchman, Ryan; Seth-Smith, Nigel; Heywood, Gareth M.

11.88 Gbits/sec: Continuing the Evolution of Serial Digital Interface, May/June, 43

Lennon, Christopher; Broome, Karen; Geller, Harold; Flad, Régis

Content ID: The Elephant in the Room, Mar., 45

Lukk, Howard; Clark, Curtis; Whittlesey, Jim.

The Current Status of Digital Intermediate, Apr., 27

Maier, Thomas O. and Fielding, Gabriel

Rendering of Scene Data in Digital Cinema Workflows, Apr., 32

Markwalter, Brian

An Update from the Consumer Electronics Association, Sept. 50

Mendiburu, Bernard

2009 Report on Stereoscopic 3D Production, Sept., 68

Morgan, Oliver

MXF "Mit Out Essence," Mar., 26

Nakagawa, Akira

The 4:2:2/4:2:0 Perfect Reconstruction Filter Set and Its Application in HD-SNG, July/Aug., 29

Nowak, Arne and Fößel, Siegfried

Digital Film Archival Using JPEG 2000 and MXF—Formats and Practical Applications, Apr., 50

Paulsen, Karl; Walter, Michael; Graham, Keith; Hoffner, Randy

Considerations in Physical Infrastructures for 3 Gbit/sec Systems Design, May/June, 30

Paulsen, Karl

Broadcast Acquisition and Post-Production, Sept., 44

Pittas, John L.

Getting the Shot: Advanced MPEG-4 AVC Encoding and Robust COFDM Modulation Deliver HD-ENG, July/Aug., 40

Sauerwald, Mark

Considerations When Designing for the SMPTE 424M Interface, May/June, 39

Sayre, Rick and Bogart, Rod

SMPTE Digital Cinema White Gamut Practices Study Group Report, Oct., 37

Seth-Smith, Nigel; Heywood, Gareth M.; Latchman, Ryan

11.88 Gbits/sec: Continuing the Evolution of Serial Digital Interface, May/June, 43

Simpson, Wes and Greenfield, Howard

2009 IPTV Update, Sept., 72

Smith, Clyde

Implementing Networked File-Based Workflows, Mar., 22

Thomas, Peter

File Formats in Television Archiving and Content Exchange, Nov./Dec., 22

Trepess, D. and Kotaka N.

User-Centric Development of New Metadata Tools to Enhance File-Based Newsgathering Workflows, July/Aug., 50

Walte:, Michael; Paulsen, Karl; Graham, Keith; Hoffner, Randy

Considerations in Physical Infrastructures for 3 Gbit/sec Systems Design, May/June, 30

Whitaker, Jerry

Advanced Television Systems Committee (ATSC) Update, Sept., 33

Whittlesey, Jim; Clark, Curtis; Lukk, Howard

The Current Status of Digital Intermediate, Apr., 27

Wilkinson, Jim

SMPTE DC Study Group Report, Apr., 22

Yu, Haoping

New MPEG-4-AVC/H.264 Profiles for Professional and High-Quality Video Applications, Jan./Feb., 45

Zou, William

Defining 3D Home Master: Summary Report of SMPTE Task Force on 3D to the Home, July/Aug., 23